NETGEAR Wireless LAN Antennas and Accessories

NETGEAR 18 dBi Patch Panel Directional Antenna - ANT24D18
NETGEAR 5 dBi Omni-directional Antenna - ANT24O5
NETGEAR 500 mW Power Booster - ANT24BNA (part of ME103BDL1NA bundle)
NETGEAR Power Injector - ANT24BDC
NETGEAR Antenna Cables

NOTE: *To obtain optimal results in extending wireless range with antenna installations, it is recommended that a qualified, professional installer is consulted for site survey and proper installation.*

Optimize WLAN Range and Power

NETGEAR's line of antennas and accessories for 802.11b and 802.11g devices give you multiple options for maximizing the reach and performance of your wireless infrastructure devices. Every WLAN deployment is unique. When planning a network that incorporates wireless, varying facility sizes, construction materials, distance between transmission points and physical obstructions must be accounted for. With both directional and omni-directional antennas (also referred to as range extenders), low-loss cables, mounting hardware, and other accessories, installers can customize a value-priced wireless solution that meets the requirements of even the most challenging applications.

18 dBi Patch Panel Directional Antenna

This indoor/outdoor directional* antenna provides a 3-in-1 solution for mixed applications in combination with an 802.11b or 802.11g access point or wireless router. One, it delivers extended access point range in a single floor environment ideally positioned in the corner of a building. Two, it functions point-to-point so that you can wirelessly connect LANs between buildings in a campus-type environment. Three, it provides multifloor transmission when placed on a ceiling, as the higher power output extends the range through typical flooring materials. Includes several mounting options (fixed wall, wall adjustable, and pole), cable sold separately.

*Directional: Concentrates transmit and receive radio-frequency energy into a cone, or beam, for higher signal strength and reception in a single direction.

5 dBi Omni-directional Antenna

This indoor omni-directional** antenna is designed to extend coverage and increase the performance of any wireless 802.11b or 802.11g device. This antenna is especially useful in optimizing coverage when you want to place your wireless access point or router out of plain view – in a wiring closet or above a ceiling pad. Locate this antenna at the top of a cubicle, on a ceiling, desktop or wall, where it is more receptive to radio signals. Ideal placement is on a wall, 2 m high, or on the ceiling facing the area to cover. Includes mounting brackets, cable sold separately.***

** Omni-directional: Radiates radio-frequency energy equally in all directions for widespread, all-points deployment.
***NETGEAR recommends use of antenna cable up to 5 m long with the ANT24O5 antenna. If you need to place the antenna at a greater distance, we recommend you use the power booster.

500 mW Power Booster****

The 500-milliwatt bi-directional power booster increases the transmission signal from an average 50 mW to 500 mW and amplifies the signal by 10 dB (10 times) in receive mode. It is used to enable a single access point device to cover a larger area. Consisting of a bi-directional amplifier, 500 mW (+27 dBm) in transmit mode for +5 to +15 dBm input, it provides 10 dB gain in receive mode. It can also be used to fully compensate for the loss of long antenna cables without any reduction of performance, and permits one to position an antenna at a greater distance from a wireless node. Used in conjunction with a high gain antenna, such as the 18 dBi ANT24D18, it can provide very high outdoor range – up to 120 km or about 74 miles. Easy to install, no configuration required; includes ceiling/wall mount bracket, cable sold separately.

**** NETGEAR has approved this product for use in the United States only. As per FCC regulations, the ANT24BNA booster is sold as part of a transmission system which includes the ME103 802.11b ProSafe Wireless Access Point and the NETGEAR 3m cable (ACC-10314-02). This product may only be ordered as part of a bundle p/n: ME103BDL1NA. Use of the ANT24BNA with any other products is strictly prohibited by FCC regulations. Netgear expressly disclaims the implied warranty of merchantability and fitness for a particular purpose for any damage caused by misuse of the ANT24BNA.

NETGEAR®
Everybody's connecting.™

Power Injector for the 500 mW Booster

An optional accessory for the 500 mW booster, this product provides power through the antenna cable to the booster. Use this device when the booster is not located near a power outlet. Installed between the access point and the booster, this device injects up to 12 volts and 2 amps to the booster. The antenna cable from the access point to the injector can be up to 3 m in length. The cable between the injector and the booster can be up to 10 m long to achieve maximum performance benefits.

Low-loss Antenna Cables

These 1.5 m, 3 m, 5 m, and 10 m antenna cables offer low loss at 2.4 GHz and added flexibility for setting up access points at a greater distance from a power source. They come with reverse SMA connectors and provide a standard connection optimized for use with NETGEAR's line of WLAN antennas, and Booster/Power Injector products (range can be drastically reduced if longer or higher loss cables than these are used.)

18 dBi Patch Panel Directional Antenna - ANT24D18

Technical Specifications

Description:	18 dBi Patch Panel Directional Antenna with reverse N female jack and reverse N to reverse SMA adapter
Typical Application:	Indoor/outdoor long range point-to-point connections
Maximum Outdoor Range[1]:	15.8 km (~9.8 miles)
Frequency Range:	2.45 ± 50 MHz
Gain[2]:	18 dBi
Beam Width:	Horizontal 60° Vertical 30°
Dimensions:	262.8 x 262.8 x 40 mm (10.35 x 10.35 x 1.58 in)
Weight:	1520 g/3.35 lbs.
Package Contents:	- 18 dBi Patch Panel Directional Antenna - ANT24D18 (cable required, sold separately) - Wall and ceiling mount brackets and hanging materials - One reverse N type to reverse SMA adapter - Installation guide - Warranty card - Support information card
Warranty:	NETGEAR 2-year warranty

[1] Range estimation is based on two wireless nodes each with an ANT24D18 antenna attached, associating with each other at 11 Mbps under ideal line-of-sight conditions.

[2] Gain: A ratio of decibels to an isotropic antenna that is commonly used to measure antenna coverage.

5 dBi Omni-directional Antenna - ANT24O5

Technical Specifications

Description:	5 dBi Omni-directional Antenna
Maximum Outdoor Range[3]:	790m (863.95 yds)
Frequency Range:	2400 to 2500 MHz
Gain:	5 dBi
Polarization:	Vertical
Beam Width:	Horizontal 120° Vertical 110°
Operating Temperature:	-20 to 65° C (-4 to 149° F)
Storage Temperature:	-30 to 80° C (-22 to 176° F)
Dimensions:	99.2 x 53.9 x 27.5 mm (3.91 x 21.2 x 1.08 in.)
Weight:	55 g/.12 lb.
Package Contents:	- Indoor 5 dBi Omni-directional Antenna ANT24O5 (cable required, sold separately) - Ceiling/wall mount bracket - Installation guide - Warranty card - Support information card
Warranty:	NETGEAR 2-year warranty

[3] Range estimation is based on two wireless nodes, each with an ANT24O5 antenna attached, associating with each other at 11 Mbps under ideal line-of-sight conditions.

NETGEAR Antenna Cables

Technical Specifications

Description:	NETGEAR low-loss cables with 2 Reverse SMA Connectors extend the length between NETGEAR wireless access points or routers and the external antenna without sacrificing range.			
Part Number:	ACC-10314-01	ACC-10314-02	ACC-10314-03	ACC-10314-04
Cable Length:	1.5 m (4.9 ft)	3 m (9.8 ft)	5 m (16.4 ft)	10 m (32.8 ft)
Maximum Cable Loss with Connectors:	1.4 dB	2.4 dB	3.7 dB	7.0 dB
Weight:	50 g (1.76 oz)	145 g (5.12 oz)	225 g (7.94 oz)	440 g (15.53 oz)
Attenuation:	.21 dB/ft maximum or .659 dB/m maximum at 2.5 GHz			
Operating Temperature:	-40 to 75° C (-40 to 167° F)			
Minimum Bend Radius:	26 mm (1 in)			
Package Size:	450 x 280 x .12 mm (17.72 x 11.02 x .004 in)			
Warranty:	NETGEAR 2-year warranty			

Please check the NETGEAR web site at http://www.NETGEAR.com/go/antennas_fcc for an updated list of approved antenna and wireless device combinations.

NETGEAR 500 mW Power Booster - ANT24BNA

Only sold as part of bundle ME103BDL1NA

Technical Specifications

Description:	Bi-directional Power Booster for 802.11b with 2 Female Reverse SMA Connectors for NETGEAR ME103 802.11b ProSafe Wireless Access Point only
Frequency Range:	2400 to 2500 MHz
Operating Mode:	TDD (burst mode)
DC Surge Protection:	600 watts TVS @ 6 V_{DC}
Current Drain (TDD Mode):	700 mA typ. @ 6 V_{DC}
Transmit Power:	26.5 dBm minimum
Transmit Input Power:	+ 5 dBm minimum
Transmit Ramp Up time:	3 µs maximum
Receiver Gain:	10 dB typical
Receiver Frequency Response:	±1 dB over operating range
Receiver Noise Figure:	5 dB maximum
Receiver Ramp Down Time:	3 µs maximum
RF Connector Insertion Loss:	0.2 dB
RF Connector Recommended Coupling Nut Torque:	.45 to .99 Nm (4.0 to 8.8 in. lbs.)
RF Connector Coupling Nut Retention Force:	22.68 kg (50 lbs.) minimum
RF Connector Contact Captivation Axial:	2.27 kg (5 lbs.) minimum
RF Connector Body:	Brass per JIS H3250 C3604 BD, gold plated per MIL-G-45204
RF Connector Contact:	Beryllium Copper per QQ-C-530, gold plated per MIL-G-45204
Operating Temperature:	0 to 70° C (32 to 158° F)
Storage Temperature:	-30 to 80° C (-22 to 176° F)
Humidity:	10% to 90%
Dimensions:	99.2 x 53.9 x 27.5 mm (3.91 x 21.2 x 1.08 in)
Weight:	510 g/1.13 lbs. (including DC block)
Package Contents:	- Indoor 500 mW Power Booster ANT24BNA - Ceiling/wall mount bracket and hanging materials - Power Supply - Installation guide - Warranty card - Support information card
Warranty:	NETGEAR 1-year warranty

NETGEAR Power Injector - ANT24BDC

Technical Specifications

Description:	Power Injector for NETGEAR ANT24BNA Power Booster with 2 Female Reverse SMA Connectors
Frequency Range:	2400 to 2500 MHz
PTC Fuse:	2.5 A / 30 V
Insertion Loss[4]:	1.5 dB max. @2.4 to 2.5 GHz
Short Circuit Protect:	PTC Fuse 2.5 A / 30 V
DC Supply Voltage:	DC, 5 V / to 12 V
Maximum Voltage:	750 VRMS max.
Coupling Nut Torque:	.45 to .99 Nm (4.0 to 8.8 in. lbs.)
Operating Temperature:	0 to 70° C (32 to 158° F)
Storage Temperature:	-10 to 80° C (14 to 176° F)
Humidity:	10% to 90%
Dimensions:	88.2 x 58.9 x 33.4 mm (3.48 x 3.32 x 1.32 in)
Weight:	220 g (7.76 oz)
Electromagnetic Compliance:	FCC Part 15 Class B
Package Contents:	- Indoor Power DC Injector ANT24BDC - Installation guide - Warranty card - Support information card
Warranty:	NETGEAR 1-year warranty

[4] Insertion loss: Attenuation

NETGEAR®

4500 Great America Parkway
Santa Clara, CA 95054 USA
Phone: 1-888-NETGEAR (638-4327)
E-mail: info@NETGEAR.com
www.NETGEAR.com

©2004 NETGEAR, Inc. NETGEAR®, the Netgear Logo, the ProSafe, Everybody's connecting and Auto Uplink are trademarks or registered trademarks of Netgear, Inc. in the United States and/or other countries. Other brand and product names are trademarks or registered trademarks of their respective holders. Information is subject to change without notice.
All rights reserved.

2/2004

D-Antennas-4